

IN THE CLAIMS:

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strikethrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

Please AMEND claims 1 and 6 and ADD new claims 11-16 in accordance with the following:

1. (Currently Amended) A numerical controller for controlling a machining operation on a workpiece by a tool by rotating the workpiece and moving the tool relatively to the workpiece, comprising:

designating means ~~to designate~~for designating data of a rotational position and a rotational velocity of the workpiece, and data of a position of the tool relative to the workpiece corresponding to the data of the rotational position of the workpiece; and

computing means for controlling the rotational position and the rotational velocity of the workpiece and the position of the tool relative to the workpiece based on the data designated by said designating means.

2. (Original) A numerical controller according to claim 1, wherein said computing means obtains a velocity of motion of the tool relative to the workpiece based on the data of the rotational position and the rotational velocity of the workpiece and the data of the position of the tool relative to the workpiece, and controls the position of the tool relative to the workpiece based on the obtained velocity motion of the tool.

3. (Original) A numerical controller according to claim 1, further comprising data input means for inputting the data of the rotational position and the rotational velocity of the workpiece, and the data of the position of the tool relative to the workpiece corresponding to the data of the rotational position of the workpiece.

4. (Original) A numerical controller according to claim 1, further comprising storage means for storing the data of the rotational position and the rotational velocity of the workpiece, and the data of the position of the tool relative to the workpiece corresponding to the data of the rotational position of the workpiece.

5. (Original) A numerical controller according to claim 4, wherein said computing means creates NC data based on the data stored in said storage means.

6. (Currently Amended) A numerical controller for controlling a machining operation on a workpiece by a tool by rotating the tool and moving the tool relatively to the workpiece, comprising:

designating means ~~to designate~~ for designating data of a rotational position and a rotational velocity of the workpiece, and data of a position of the tool relative to the workpiece corresponding to the data of the rotational position of the workpiece; and

computing means for controlling the rotational position and the rotational velocity of the tool and the position of the tool relative to the workpiece based on the data designated by said designating means.

7. (Original) A numerical controller according to claim 6, wherein said computing means obtains a velocity of motion of the tool relative to the workpiece based on the data of the rotational position and the rotational velocity of the tool and the data of the position of the tool relative to the workpiece, and controls the position of the tool relative to the workpiece based on the obtained velocity of motion of the tool.

8. (Original) A numerical controller according to claim 6, further comprising data input means for inputting the data of the rotational velocity and the rotational position of the tool, and the data of the position of the tool relative to the workpiece corresponding to the data of the rotational position of the tool.

9. (Original) A numerical controller according to claim 6, further comprising storage means for storing the data of the rotational position and the rotational velocity of the tool, and the data of the position of the tool relative to the workpiece corresponding to the data of the

rotational position of the tool.

10. (Original) A numerical controller according to claim 9, wherein said computing means creates NC data based on the data stored in said storage means.

11. (New) A method for controlling relative motions of a tool and a workpiece in a machining apparatus, comprising:

designating values of a rotational position and a rotational velocity of the workpiece;

designating values of a position of the tool corresponding to the values of the rotational position of the workpiece;

computing the velocity of the motion of the tool relative to the workpiece based on the data of the rotational position, the rotational velocity of the workpiece and the position of the tool; and

controlling the position of the tool relative to the workpiece based on the obtained velocity motion of the tool.

12. (New) The method according to claim 11, further comprising inputting the rotational position and the rotational velocity of the workpiece, and the position of the tool relative to the workpiece corresponding to the rotational position of the workpiece.

13. (New) The method according to claim 11, further comprising storing the rotational position and the rotational velocity of the workpiece, and the position of the tool relative to the workpiece corresponding to the rotational position of the workpiece.

14. (New) The method according to claim 11, further comprising inputting the data of the rotational velocity and the rotational position of the tool, and the position of the tool relative to the workpiece corresponding to the rotational position of the tool.

15. (New) The method according to claim 11, further comprising inputting the rotational velocity and the rotational position of the tool, and the position of the tool relative to the workpiece corresponding to the rotational position of the tool.

16. (New) The method according to claim 11, further comprising storing the rotational position and the rotational velocity of the tool, and the position of the tool relative to the workpiece corresponding to the rotational position of the tool.